

KRIVSHENKO, G.I., kandidat tekhnicheskikh nauk.

Speed regulator for hydroturbines of medium capacity. Mekh.trud.rab. 7  
no.5:49 My '53. (MLRA 6:5)  
(Turbines)

KRIVSHCH, VASILY SERGEVICH

Osnovnye lozhaiki Marksizma-Leninizma o kollektivnosti partynernykh rukovodstva. Moskva, Gospolitizdat, 1961.

95 p.

At head of title: Voprosy Partynernykh Stroitel'stva.  
Includes bibliographical references.

KRIVSHIN, Aleksandr Pavlovich, kandidat tekhnicheskikh nauk; PSEKHNICHNYI,  
Gennadiy Ivanovich, inzhener; VOSKRESENSKIY, N.I., redaktor; KOGAN,  
F.L., tekhnicheskii redaktor.

[Repairing motor road rollers] Remont motornykh katkov. Moskva,  
Nauchno-tekhn. izd-vo avtotransp. lit-ry, 1955. 49 p.  
(Road rollers)

KRIVSHIN, Aleksandr Pavlovich, kandidat tekhnicheskikh nauk; SKOVRONEK,  
Genrikh Karlovich, inzhener; MANANKIN, N.V., redaktor; MAL'KOVA,  
N.V., tekhnicheskii redaktor

[Repair of the D-150A asphalt distributor] Remont asfal'to-  
ukladchika D-150A. Moskva, Nauchno-tekhn. izd-vo avtotransp.  
lit-ry, 1957. 82 p. (MIRA 10:7)  
(Road machinery)

BOKOLYAR, Samuil Moiseyevich; KRIVSHIN, A.P., kand.tekhn.nauk, retsenzent;  
SNOPKOV, M.A., inzh., red.; SAVKL'YEV, Ye.Ya., red.izd-va;  
GORDEYEVA, L.P., tekhn.red.

[Repairing road rollers] Remont dorozhnykh katkov. Moskva, Gos.  
nauchno-tekhn.izd-vo mashinostroit.lit-ry, 1960. 99 p.  
(MIRA 13:7)

(Road rollers)

LEVIN, Matvey Pavlovich; KRIVSHIN, A.P., red.; STEPANOV, V.M., red.izd-va;  
NIKOLAYEVA, L.N., ~~tekhn.izd.~~

[Road rollers; operator's manual] Motornye katki; posobie mashinistu. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog, 1960. 215 p.

(Rollers (Earthwork))

(MIRA 13:12)

KRIVSHIN, Aleksandr Pavlovich, kand. tekhn. nauk; MIKHAYLOV, Aleksey  
Nikolayevich, inzh.; KARNAUKHOV, V.M., retsenzent; GANYUSHIN,  
A.I., red.; GALAKTIONOVA, Ye.N., tekhn. red.

[Repairing motor graders] Remont avtogreiderov. Moskva, Nauchno-  
tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog.  
RSFSR, 1961. 132 p. (MIRA 15:2)  
(Graders (Earth-moving machinery)—Maintenance and repair)

KOLYSHEV, Viktor Ivanovich; KRIVSHIN, A.P., red.; DONSKAYA, G.D.,  
tekh. red.

[Automation of asphalt-concrete plants] Avtomatizatsia  
asfal'tobetonnykh zavodov. Moskva, Nauchno-tekhn. izd-vo  
avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1961. 141 p.  
(MIRA 15:3)

(Asphalt concrete)

(Automation)



RAZYGRAYEV, Aleksandr Matveyevich; KRIVSHIN, A.P., kand. tekhn. nauk, retsenzent; AYZENBERG, B.I., inzh., retsenzent; CHUDAKOV, K.P., kand. tekhn. nauk, nauchnyy red.; GORDEYEV, P.A., red. izd-va; OSENKO, L.M., tekhn. red.

[Repair of building machinery and equipment] Remont stroitel'nykh mashin i oborudovaniia. Moskva, Gos. izd-vo lit-ry' po stroit., arkhitek. i stroit. materialam, 1961. 295 p. (MIRA 14:11)  
(Building machinery--Maintenance and repair)

ZELENKOV, Georgiy Ivanovich, kand.tekhn.nauk, dotsent; KRIVSHIN, Aleksandr Pavlovich, kand.tekhn.nauk, dotsent; FRAYENOV, Pavel Semenovich, kand.tekhn.nauk, dotsent; DEKHTERINSKIY, Lev Vladimirovich, kand.tekhn.nauk, dotsent; VOSKRESENSKIY, N.N., red.; STEPANOV, V.M., red.izd-va; DONSKAYA, G.D., tekhn.red.

[Principles of designing repair shops and repair of road machinery]  
Remont dorozhnykh mashin i osnovy proektirovaniia remontnykh predpriiati. Moskva, Nauchno-tekhn.izd-vo M-va avtomobil'nogo transp. i shosseinykh dorog RSFSR, 1961. 500 p. (MIRA 14:6)  
(Road machinery--Repairing)

KRIVSHIN, Aleksandr Pavlovich, kand. tekhn. nauk; STEPANOV, V.M.,  
red.; BODANOVA, A.P., tekhn. red.

[Use of motorized graders] Ekspluatatsia avtogreiderov.  
Moskva, Avtotransizdat, 1963. 99 p. (MIRA 16:6)  
(Graders (Earthmoving machinery))

KRIVSHIN, A.P., kand.tekhn.nauk

Field tests of motor graders. Mekh. stroi. 20 no.4:12-14 Ap  
'63. (MIRA 16:3)  
(Graders (Earthmoving machinery)—Testing)

RAZYGRAYEV Aleksandr Matveyevich; KRIVSHIN, A.P., kand. tekhn.  
nauk, retsentsent; MIKHAYLOV, E.Ye., inzh., retsentsent;  
LYTKINA, L.S., red.

[Technology and organization of the repair of building  
machinery and equipment] Tekhnologiya i organizatsiya  
remonta stroitel'nykh mashin i oborudovaniya. Izd.2.  
Moskva, Stroiizdat, 1964. 383 p. (MIRA 17:9)

KRIVSHIN, Aleksandr Pavlovich; PECHENIN, Nikolay Fodorovich;  
~~KARHAUKH, V.M., retsenzent~~; MIKHAYLOV, L.N., red.

[repairing bulldozers by the unit method] Remont bul'-  
dozerov agregatnym metodom. Moskva, Transport, 1964.  
168 p. (MIRA 18:3)

MARYSHEV, Boris Semenovich; KITOV, Maks Nikolayevich; KRIVSHIN,  
A.P., redaktor; MIKHAYLOV, A.K., red.

[Handbook for the scraper operator] Posobie mashinistu  
skrepera. Moskva, Transport, 1965. 89 p.  
(MIRA 18:2)

KRIVSKA, L.

Climate of Ondrejov for astronomical needs. p. 133.  
METEOROLOGICKE ZPRAVY. Vol. 6, No. 5, Oct. 1953.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, No. 3. March 1956



KRIVSKAYA, T. Yu.

Lower Cretaceous sediments in White Russia. Trudy VSEGEI 91:  
169-172 '63. (MIRA 19:7)

KRIVSKAYA, T.Yu.

Significance of structural characteristics of marl and chalk  
rocks for the stratigraphy of upper Cretaceous sediments in  
White Russia. Inform.sbor. VSEGEI no.43:71-78 '61. (MIRA 14:12)  
(White Russia--Geology, Stratigraphic)  
(Basins, Sedimentary)

I. 22952-66 EWT(1) CW

ACC NR: AP6012739

SOURCE CODE: UR/0033/66/043/002/0385/0389

AUTHOR: Gnevyshev, M. N., Krivski, L.

14  
B

ORG: Mountain Astronomical Station, Main Astronomical Observatory, Academy of Sciences SSSR (Gornaya astronomicheskaya stantsiya Glavnoy astronomicheskoy observatorii); Astronomical Institute, Czechoslovak Academy of Sciences Ondrejov Observatory (Astronomicheskiy in-t Czechoslovatskoy Akademii Nauk, Observatoriya Ondrzheyova)

TITLE: Correlation of protonic flares with the corona in the 11-year cycle

SOURCE: Astronomicheskiy zhurnal, v. 43, no. 2, 1966, 385-389

TOPIC TAGS: proton flare, hard x radiation, chromospheric flare, subcosmic ray, solar cosmic ray

ABSTRACT: Proton flares are the most active solar processes associated with intense hard X-radiation and emission of high-energy particles. Proton flares differ from chromospheric flares by their division into two bands which are initially separate and subsequently join, forming a Y shape. During this Y phase of activity, the radio emission on centimeter and decimeter waves attains the maximum. Observations data obtained by satellites and rockets measuring cosmic and subcosmic rays revealed that these flares consisted of protons; therefore they were so named. The energy of solar cosmic rays is from  $10^8$  to  $10^{11}$  eV before decomposition into secondary rays. A table is given in the original article which contains the numbers of cosmic and sub-

2

Card 1/2

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ACC NR: AP6012739

cosmic flares which occurred in each year from 1954 to 1964. This table shows flare maxima in 1957 and 1960. These maxima are associated with maxima of solar coronal, prominence, and sunspot activity. An isopleth of the intensity of the green coronal 5303 Å line at heliographic latitudes from +35° to -35° is drawn. The intensity of the line on the solar disk coincides with coronal activity. Another table in the original article contains the number of chromospheric flares occurring during one hour of observation in the same years. The maxima coincide in both tables. Orig. art. has: 1 figure and 3 tables. [EG]

SUB CODE: 03/ SUBM DATE: 27Nov65/ ORIG REF: 005/ OTH REF: 005/ ATD PRESS:  
4237

Card 2/2 10

KRIVSKIY, Aleksandr Samsonovich; LAGUTINA, Ye.V., red.; FROMINA,  
N.D., tekhn. red.

[Viruses against microbes; bacteriophagy] Virusy protiv mikrobov;  
bakteriofagiia. Moskva, Medgiz, 1962. 89 p. (MIRA 16:1)  
(BACTERIOPHAGE)

I 13402-63

ACCESSION NR: AP3000525

S/0020/63/150/002/0399/0402

AUTHOR: Kriviskiy, A. S.; Zavit'gel'skiy, G. B.; Ivanov, V. I.; Ly\*senko, A. M. 44

TITLE: Kinetics of the mutagenic action of UV rays on extracellular S sub D bacteriophages of Escherichia coli

SOURCE: AN SSSR. Doklady, v. 150, no. 2, 1963, 399-402

TOPIC TAGS: kinetics, mutation, UV irradiation, Escherichia coli, S sub D bacteriophage

ABSTRACT: The authors studied the relationship between the mutation frequency of the phage and the dose of UV irradiation in vitro. Broth containing S sub D phage was diluted with 0.35% NaCl to a concentration of less than  $5 \times 10^7$  phages/ml. At these concentrations the screening effect was negligible. Phage was first adsorbed on bacteria or directly inoculated into Petri dishes by the two-layer method with E. coli, strain SK, and incubated 18-20 hours in the dark. Phage was exposed to UV radiation at room temperature with continuous rocking. A BUV-15 lamp, emitting about 80% monochromatic light with  $\lambda = 2537$  angstroms was used as the source. The intensity was about 1 erg per  $\text{cm}^2 \times \text{sec}$ . Doses were measured with a UV dosimeter. After irradiation the number of sterile plaques and mutant sterile plaques were counted. To explain the decrease in the percentage  
Card 1/2

L 13409-63

ACCESSION NR: AP3000525

of mutations obtained with large doses of UV radiation, the authors advance the working hypothesis that the structure of DNA in phage particles is changed to a more radiation-resistant form, both with respect to the lethal and mutagenic action of UV rays. These results indicate that the characteristic, non-linear relationship between the mutation produced and the dose of UV radiation is the result of some primary mechanism of the reaction of DNA to UV radiation and is not related to an indirect effect of radiation on the cellular components and metabolism. Orig. art. has: 3 figures and 1 table.

ASSOCIATION: Institut radiatsionnoy i fiziko-khimicheskoy biologii Akademii nauk SSSR (Institute of Radiation and Physico-Chemical Biology, Academy of Sciences, SSSR)

SUBMITTED: 06Dec62

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ENCL: 00

SUB CODE: 00

NO REF SOV: 003

OTHER: 017

Card 2/2

KRIVSKIY, I.Yu. [Kryvsk'kyi, I.IU.]

A specific generalization of quantum mechanics. Ukr. fiz. zhur.  
9 no.8:813-826 Ag '64. (MIRA 17:11)

1. Uzhgorodskiy gosudarstvennyy universitet.



15580

S/881/57/000/001/006/013  
A066/A126

24 LSCU

AUTHORS: Shkoda-Ul'yanov, V. A., Lend'yel, V. I., Krivskiy, I. Yu.

TITLE: Determination of the total cross sections of  $\gamma$ n-reactions for medium and light elements with the aid of the avalanche theory

SOURCE: Uzhgorod. Universitet. Nekotoryye problemy sovremennoy fiziki yadra i elementarnykh chastits; sbornik statey, no. 1, 1957, 60 - 72

TEXT: It has been shown earlier (V. I. Gol'danskiy and V. A. Shkoda-Ul'yanov. ZhETF, 28, 623 (1955)) that the total cross sections of  $\gamma$ n-reactions for heavy elements can be calculated precisely enough by using the equilibrium spectrum obtained with the help of the avalanche theory, i.e., the photon spectrum integrated over the entire length of the spectrum. This method is now applied to light and medium nuclei, and the resulting spectrum is used to calculate the total  $\gamma$ n-reaction cross section for iron which is in good agreement with experimental

Card 1/2

Determination of the total cross .....

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A066/A126

data of several authors. Thus,  $\sigma_{tot} = 0.50 \text{ Mev} \cdot b$ , the experimental value being  $0.43 \text{ Mev} \cdot b$  (cf. L. I. Katz and R. G. Baker. Phys. Rev., 82, 271 (1951); L. I. Katz and A. G. Cameron. Can. Journ. Phys., 29, 518 (1951)). For elements heavier than iron it is shown that  $\sigma_{tot}$  can be determined from the photoneutron yield of a lump 10 cm thick. There are 4 tables and 2 figures.

X

SUBMITTED: October 15, 1956

Card 2/2

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S/881/57/000/001/009/013  
A066/A126

AUTHORS: Krivskiy, I.Yu., Lend'yel, V.I.

TITLE: The equilibrium spectrum of photons near the initial energy

SOURCE: Uzhgorod. Universitet. Nekotoryye problemy sovremennoy fiziki yadra i elementarnykh chastits; sbornik statey, no. 1, 1957, 86 - 88

TEXT: A comparison was made between S.Z. Belen'kiy's (Lavinnyye protsessy v kosmicheskikh luchakh - Avalanche processes in cosmic rays, GTTI, 1948) approximate equilibrium spectrum

$$\Gamma_{IE}(E_0, E) = \frac{1}{\beta_0} \left\{ e^{\frac{E_0 - E}{\beta_0}} \int_0^{\frac{E_0 - E}{\beta_0}} \frac{e^{-x}}{x^2} dx - \frac{1}{\beta_0} [1 - e^{-\frac{E_0 - E}{\beta_0}}] + \frac{f(0)}{v_0} \delta(E_0 - E) \right\} \quad (5)$$

and the spectrum obtained by Lend'yel et al. (Nauchnyye zapiski Uzhgorodskogo gosudarstvennogo universiteta, v. 18, 1957):

$$\Gamma_{II}(E_0, E) = \frac{1}{\beta_0} \left\{ e^{\frac{E_0 - E}{\beta_0}} \int_0^{\frac{E_0 - E}{\beta_0}} \frac{e^{-x}}{x^2} dx - \frac{1}{\beta_0} [1 - e^{-\frac{E_0 - E}{\beta_0}}] + \frac{f(0)}{v_0} \delta(E_0 - E) + \gamma(E_0, E) e^{-\frac{E_0 - E}{\beta_0}} - \gamma(E_0, E) \right\} \quad (4)$$

Card 1/2

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The equilibrium spectrum of photons near the ....

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A066/A126

where 
$$\varphi(\epsilon_0, \epsilon) = \frac{1}{\epsilon_0^2} \left[ \frac{\epsilon (\epsilon + 1)^2 + 1}{4 \epsilon_0^2} - \frac{\epsilon \epsilon + 1}{3 \epsilon_0} \right], \quad \epsilon = \frac{E f(0)}{\beta}, \quad \epsilon_0 = \frac{E_0 f(0)}{\beta}, \quad f(0) = 2.29, \quad \epsilon_0 = 0.773.$$

Here,  $E_0$  is the energy of the primary photon producing the avalanche,  $E$  the photon energy, and,  $\beta$  the critical energy of the medium. The number of photons given by Belen'kiy's spectrum for the energy range near the initial energy is shown to be too small by 20%. There is 1 table.

VB

SUBMITTED: October 1, 1956

Card 2/2

67181

SOV/58-59-7-14826

24.6510

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 36 (USSR)

AUTHORS: Krivskiy, I.Yu., Lend'yel, V.I., Lomsadze, Yu.M.TITLE: On a Possible Explanation of N-P Scattering<sup>19</sup>PERIODICAL: Dokl. i soobshch. Uzhgorodsk. un-t, 1958, Nr 2, pp 11 - 14ABSTRACT: It is suggested that an ordinary pion beam<sup>17</sup> contains, in addition to the usual pseudo-scalar pions, an admixture of scalar pions that form an isotopic sextet together with the former. Using the Hamiltonian of interaction

$$H(x) = ig : \bar{\Psi} \gamma_5 \tau_1 \Psi \varphi_1 : + g' : \bar{\Psi} \tau_1 \Psi \varphi_1 : ;$$

the neutron-proton scattering process (the nucleons not being polarized) is then calculated by the usual method of perturbations. In the case of the constants  $g = 7.6$  and  $g' = 0.96$ , it is possible to achieve sufficiently satisfactory agreement between the magnitudes of the differential, as well as total effective cross sections and the experiments in a wide energy range from  $\sim 100$  to  $\sim 600$  mev. If it can be admitted that the principle of the independence of nuclear forces is violated while retaining their symmetry at high energies, and if one assumes that  $\varphi_3 =$

Card 1/2

4

On a Possible Explanation of N-P Scattering

67181

SOV/58-59-7-14826

=  $\sqrt{2} \varphi_0$  (in contrast to the usual  $\varphi_3 = \varphi_0$ ), it then becomes possible to achieve just as satisfactory an agreement between theory and experiment in the case of p-p and n-n scattering as well. Such violation of the charge independence of nuclear forces at high energies (at 10 Mev amounting to less than 1% and at 40 Mev amounting to less than 10%) apparently does not contradict experimental data available.

Yu.M. Lomsadze

4

Card 2/2

SOV/58-59-7-14890

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 46 (USSR)

AUTHORS: Krivskiy, I.Yu., Lomsadze, Yu.M.

TITLE: On Beta Interaction<sup>19</sup> Between the Electron and the Proton. I.

PERIODICAL: Dokl. i soobshch. Uzhgorodsk. un-ta, 1958, Nr 2, pp 31 - 33

ABSTRACT: The authors suggest that a study of the  $e + p \rightarrow n + \nu$  process may provide an answer to the question as to which of the 20 admissible variants of beta decay theory are actually realized in nature. The authors cite the results of calculating the above-mentioned process for a number of variants of beta decay theory.

Yu.M. Lomsadze ✓

Card 1/1

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SOV/58-59-7-14827

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 36 (USSR)

AUTHORS: Krivskiy, I.Yu., Lend'yel, V.I., Lomsadze, Yu.M.TITLE:  $\pi^+$ -P Scattering in the Light of the Pion Doublet HypothesisPERIODICAL: Dokl. 1 soobshch. Uzhgorodsk. un-t, 1958, Nr 2, pp 39 - 42

ABSTRACT: The process of  $\pi^+$ -p scattering is examined on the basis of the hypothesis contained in the authors' preceding study (abs. 14826) but with a substitution of the PS(PS) variant for the PS(PV) variant without affecting the results of that study. It is shown that it is possible to achieve agreement between theory and experiment up to energies of  $\sim 200$  mev in the framework of the usual method of perturbations if it be assumed that the scalar pions in the beam account for approximately 1 or 2% of the total. In this case the coupling constant in the PS(PV) variant corresponds exactly to the constant obtained for the PS(PS) variant in the authors' preceding study on the basis of examining nucleon-nucleon scatterings (with allowance for the equivalence theorem).

Card 1/1

Yu.M. Lomsadze ✓



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67182

SOV/58-59-7-14828

Translation from: Referativnyy Zhurnal Fizika, 1959, Nr 7, p 36 - 37 (USSR)

AUTHORS: Krivskiy, I.Yu., Lend'yel, V.I., Lomsadze, Yu.M.

TITLE: Some Considerations Concerning Pion Parity<sup>19</sup>

PERIODICAL: Dokl. i soobshch. Uzhgorodsk. un-t, 1958, Nr 2, pp 43 - 46

ABSTRACT: Since the hypothesis of the parity pion doublet (abs. 14826, 14827) leads to satisfactory agreement between theory and experiment (mainly in connection with nucleon-nucleon scattering), the authors proceed to an analysis of the basic experimental and theoretical data available at the present time. These data lead the authors to conclude that pions have a pseudo-scalar character. The authors examine data concerning neutral pion decay into two gamma quanta, negative pion capture by the deuteron,  $\pi^-$ -p scattering entailing charge-exchange, and the photoproduction of pions; they conclude that these data in principle do not contradict the hypothesis of the parity pion doublet. The authors suggest a number of experiments for the direct verification of the existence of a slight admixture of scalar mesons in the pion beam.

Card 1/1

Yu.M. Lomsadze

RK 173 Ry, L. Yu

21(1,8); 24(5) PHASE I BOOK EVALUATION SOV/1369

Vseoyuznaya mezhvuzovskaya konferentsiya po kvantovoy teorii polya i teorii elementarnykh chastits. Uznagorod, 1958

Problemy sovremennoy teorii elementarnykh chastits. No. 2: Trudy konferentsii... (Problems in the Modern Theory of Elementary Particles. No. 2: Transactions of the All-Union Inter-Vuz Conference on the Quantum Field Theory and the Theory of Elementary Particles) Uznagorod, Zakarpatskoye oblastiynoye izd-vo, 1959. 214 p. 5,000 copies printed.

Ed.: Yu. Lomazda, Docent; Tech. Ed.: M. Belous.

PURPOSE: This book is intended for physicists, particularly those concerned with problems in the field of elementary particles and the quantum theory.

COVERAGE: This book contains articles on elementary particles originally read at the All-Union Inter-Vuz Conference held at Uznagorod State University on October 26, 1958. Among the topics discussed are: the spinor field theory, the fusion theory, Lorentz contractions, parity studies, nucleon-nucleon scattering, etc. English abstracts accompany each article. References follow each article.

Dolgobov, A.I. Polarization of Quanta Emitted by  $\mu$  Mesons 139

Barashnikov, V.S. Optical Analysis of the Interaction Between Fast Neutrons and Fission Particles With Neutrons and Neutrons 142

Sharov, O.P. The Semi-Phenomenological Theory of Nuclear Forces 149

Fisher, Zh.A. and I. Chulii. Partial Wave Analysis of the Generation of Particles 157

Klitar, I.S. and I.S. Isakov. The Effect of the Form-Factor on the Processes of Bremsstrahlung and Generation of Pairs on Protons 165

Kilimovskiy, Y.A. On the Interaction Between  $\Delta$ -Particles and Neutrons in the Nucleus 175

Lomazda, Yu.M. The  $\lambda$ -Summation of the Perturbation Method Series 182

Lomazda, Yu.M., V.I. Lyudskiy, and L.Yu. Krivitskiy. The Problem of Neutron-Nucleon Scattering in High-Energy Regions 195

Lomazda, Yu.M., Y.I. Lyudskiy, L.Yu. Krivitskiy, Y.I. Puchonish, Z.V. Emelina, and V.I. Lyudskiy. The Application of the Method of  $\lambda$ -Summation to the Interpretation of the Neutron-Nucleon Scatterings 211

S/058/61/000/010/005/100  
A001/A101

AUTHORS: Lomsadze, Yu. M., Lend'yel, V. I., Krivskiy, I. Yu.

TITLE: On the problem of nucleon-nucleon scattering at high energies

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 24-25, abstract 10A256  
(V sb. "Probl. sovrem. teorii elementarn. chastits", no. 2, Uzhgorod, 1959, 195-210, Engl. summary)

TEXT: The consequences of the hypothesis on existence of a scalar  $\tilde{\eta}$ -meson triplet in addition to pseudoscalar mesons, are studied in detail. It is shown that an assumption of the presence in a  $\tilde{\eta}$ -meson beam of 1-2% admixture of scalar  $\tilde{\eta}$ -mesons does not contradict available experimental data; moreover, it is possible, even in the framework of the perturbation method, to obtain characteristics of a number of processes concordant with experiments. In particular, the following results are obtained on the basis of this hypothesis: 1) correct ratio of cross sections for processes of  $\tilde{\eta}$ -meson scattering on deuterons, 2) good value for the Panovsky ratio, 3) correct ratio of cross sections for photoproduction processes, etc. Experiments are proposed for detecting scalar  $\pi$ -mesons. Considerations are presented on violation of charge independence of

Card 1/2

On the problem of nucleon-nucleon scattering ...

S/058/61/000/010/005/100  
A001/A101

nuclear forces at high energies. Total and differential cross sections of NN-scattering (calculated to the first approximation of the perturbation theory) agree well with experiments in the 100 - 600 Mev range.

V. Lend'yel

[Abstracter's note: Complete translation]

Card 2/2

S/058/61/000/010/006/100  
A001/A101

AUTHORS: Lomsadze, Yu. M., Lend'yel, V. I., Krivskiy, I. Yu., Pushchich, V.I.,  
Khimich, I. V., Lukin, L. P., Ernst, B. M.

TITLE: On applying modified perturbation method to interpretation of nucleon  
scattering

PERIODICAL: Referativnyy zhurnal. Fizika, no. 10, 1961, 25, abstract 10A257  
(V sb. "Probl. sovrem. teorii elementarn. chastits", no. 2, Uzh-  
gorod, 1959, 211-216, Engl. summary)

TEXT: Differential effective cross sections for all types of NN-scatter-  
ing have been determined in the first non-vanishing approximation of the modified  
perturbation method (consisting in a special summation over all simplest baryon  
loops inserted into internal  $\bar{\psi}$ -meson lines of the Feynman 2nd-order graphs);  
assumptions are made on existence of scalar  $\bar{\psi}$ -mesons and violation of charge  
independence of nuclear forces at high energies. The cross sections calculated  
for the range 100 - 600 Mev agree sufficiently well with experimental data.  
Thereby the results of the preceding study (abstract 10A256) are additionally  
substantiated. An interesting possibility is discussed that at sufficiently

Card 1/2

On applying modified perturbation ...

S/058/61/000/010/006/100  
A001/A101

great coupling constant, the scattering cross section may be completely independent of its value.

[Abstracter's note: Complete translation]



Card 2/2

LOMSADZE, Yu.M.; LEND'YEL, V.I.; KRIVSKIY, I.Yu.

Problem of the scattering of nucleons on nucleons at high energies.  
Izv. vys. ucheb. zav.; fiz. no.4:123-129 '59. (MIRA 13:3)

1.Uzhgorodskiy gosuniversitet.  
(Nucleons--Scattering)

LOMSADZE, Yu.M.; LEND'YEL, V.I. [Lend'iel, V.I.]; KRIVSKIY, I.Yu.  
[Kryvs'kyi, I.IU.]

Scattering of a neutron on a proton from the point of view  
of a  $\pi$ -meson pair doublet. Ukr. fiz. zhur. 4 no.1:123-125  
Ja-F '59. (MIRA 12:6)

1.Uzhgorodskiy gosudarstvennyy universitet.  
(Neutrons--Scattering) (Protons) (Mesons)



KRIVSKIY, I. Yu. [Kryvs'kyi, I. IU.]; LOMADZE, Yu.M.; PUSCHICH, V.I.;  
KHIMICH, I.V.

.Problem of theradiative decay of a  $\pi$ -meson. Ukr. fiz. zhur. 5  
no.6:777-780 N-D '60. (MIRA 14:3)

1. Ushgorodskiy gosudarstvennyy universitet.  
(Mesons—Decay)

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S/058/62/000/004/014/160  
A058/A101

AUTHORS: Krivskiy, I. Yu., Lomsadze, Yu. M., Khimich, I. V.

TITLE: Concerning the correspondence principle in the theory of the quantized "probability-amplitude field"

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962, 37, abstract 4A294 ("Dokl. i soobshch. Uzhgorodsk. un-t. Ser. fiz.-matem. n.", 1961 no. 4, 15 - 18)

TEXT: The authors prove a theorem of equivalence between the conventional quantum-field theory and the special case of their proposed theory in which the probability-amplitude field is being quantized (RZhFiz, 1961, 8A214 - 215).

[Abstracter's note: Complete translation]

Card 1/1

24.4400

S/058/62/000/004/015/160  
A058/A101

AUTHORS: Khimich, I. V., Lomsadze, Yu. M., Krivskiy, I. Yu.

TITLE:  $U(x)$ - $uN(k)$  representations in quantum-field theory

PERIODICAL: Referativnyy zhurnal, Fizika, no. 4, 1962, 37, abstract 4A295  
("Dokl. i soobshch. Uzhgorodsk. un-t. Ser. fiz.-matem. n.", 1961,  
no. 4, 25 - 27)

TEXT: The authors establish a connection between functionals in different representations of the new strong-coupling method proposed earlier by one of the authors (RZhFiz, 1961, 11A247). ✓

[Abstracter's note: Complete translation]

Card 1/1

S/058/62/000/005/015/119  
A001/A101

AUTHORS: Lomsadze, Yu. M., Krivskiy, I. Yu., Khimich, I. V.

TITLE: Some aspects of the new method of "strong" coupling in the theory of quantized fields

PERIODICAL: Referativnyy zhurnal, Fizika, no. 5, 1962. 34, abstract 5A315  
("Dokl. i soobshch. Uzhgorodsk. un-t. Ser. fiz.-matem. n.", 1961, no. 4, 28-32)

TEXT: The method of strong coupling suggested earlier by one of the authors (RZhFiz. 1961, 11A247) is discussed. The possibility is considered of a consequent calculation, within the framework of this method, of Green's functions, in particular. Green's function of a single particle.

[Abstracter's note: Complete translation]

Card 1/1

KRIVSKIY, I.Yu.

Close connection between the matrix elements in the quantum field theory of probability amplitudes and the ordinary quantum field theory. Dokl. i soob. UzhGU. Ser. fiz.-mat. i ist. nauk no.5:3-8 '62. (MIRA 17:9)

KUSHTAN, V.I.; KRIVSKIY, I.Yu.; DERFI, S.M.

Analyticity of a modified nucleonic Green function. Dokl. i  
soob. UzhGU. Ser. fiz.-mat. 1 ist. nauk no.5:16-20 '62.  
(MIRA 17:9)

LOMSADZE, Yu.M.; LEND'YEL, V.I.; KRIVSKIY, I.Yu. [Kryvs'kyi, I.IU.]  
KHIMICH, I.V.

Third All-Union Conference on the Theory of Elementary Particles.  
Ukr.fiz.zhur. 7 no.4:448-454 Ap '62. (MIRA 15:8)  
(Particles (Nuclear physics))

*Kryvskiy, I. Yu*

94.4400

S/135/62/007/009/002/006  
D234/D308

AUTHORS: Khimich, I.V., Lomsadze, Yu.II. and Kryvs'kiy, I. Yu.  
TITLE: Some physical consequences of the theory of quantized field of the probability amplitude  
PERIODICAL: Ukrayins'kyy fizychnyy zhurnal, v. 7, no. 9, 1962, 967-973

TEXT: The authors refer to their previous papers where the above theory was formulated (Doklady i soobshcheniya Uzhgorodskogo universite-ta, seriya fiz.-mat. nauk, no. 4, 15, 1961; Yu.M. Lomsadze, as above, no. 3, 11, 1960, no. 4, 9, 1961, Nucl. Phys. 36, 1962) and derive an expression connecting the probability of transition from the initial to the final state, defined by this theory, with the experimentally observed probability. It is stated that the matrix element in the new theory can be obtained with any approximation in closed form according to the perturbation method developed in the papers quoted above. The new constant I can have any value. The authors quote the expressions for the matrix element in the case

Card 1/2

*JB*



Some physical consequences ...

S/185/62/007/009/002/006  
D234/D303

of  $I = 2$ , in the first and second approximation. They conclude that renormalization in the new theory has no additional difficulties in comparison with the usual quantized field theory. If the errors in determining the initial momenta of the particles are sufficiently small, the effective cross section given by the new theory for any process is the same as in the usual theory, up to the second approximation (for  $I = 2$ ). It is found that for finding  $I$  special experiments are necessary, in which the initial state of the system would contain sufficiently distant momenta. The basic ideas forming the basis of the new theory are discussed. An essential feature of the new theory is stated to be the fact that it allows any degree of accuracy in measuring the complete set of physical quantities but no absolutely exact measurement. The authors express their gratitude to Ya.A. Smorodyns'kyy, B.L. Yoffe, M.I. Podhorets'kyy and K.D. Tolstoy for discussion. B

ASSOCIATION: Uzhhorods'kyy derzhuniversytet (Uzhhorod State University)

SUBMITTED: January 20, 1962  
Card 2/2

LOMSADZE, Yu.M., dotsent; KRIVSKIY, I.Yu.; KHIMICH, I.V.

Experimental verification of certain implications of the quantum field theory of probability amplitudes. Dokl. i soob. UzhGU. Ser. fiz.-mat. i ist. nauk no.5:8-13 '62.

(MIRA 17:9)

1. Otvetstvennyy radaktor zhurnala "Doklady i soobshcheniya Uzhgorodskogo gosudarstvennogo universiteta; seriya fiziko-matematicheskikh i istoricheskikh nauk" (for Lomsadze).

LOMSADZE, Yu.M.; KRIVSKIY, I.Yu.; KHIMICH, I.V.

General principles of developing a theory of the quantized field  
of the probability amplitude. Izv. vys. ucheb. zav.; fiz. no.4:  
26-33 '63. (MIRA 16:9)

1. Uzhgorodskiy gosudarstvennyy universitet.  
(Quantum field theory)

LOMSADZE, Yu.M.; KRIVSKIY, I.Yu.; KHEMICH, I.V.

Physical nature of the theory of the quantized field of the probability amplitude. *Izv. vys. ucheb. zav.; fiz.* no.4:113-119 '63.  
(MIRA 16:9)

1. Uzhgorodskiy gosudarstvennyy universitet.  
(Quantum field theory) (Probabilities)

LOMSADZE, Yu.M.; KRIVSKIY, I.Yu.; KHIMICH, I.V.

Fourth All-Union Conference on the Theory of Elementary Particles.  
Izv.vys.ucheb.zav.; fiz. no.3:190-191 '63. (MIRA 16:12)

1. Uzhgorodskiy gosudarstvennyy universitet.

KRIVSKIY, I, YU

L 17178-63

EWT(1)/EWT(m)/FCC(w)/BDS AFFTC/ASD

S/0185/63/008/005/0601/0605

ACCESSION NR: AP3000242

KRIVSKIY

59  
55

AUTHOR: Lomsadze, Yu. M.; Kryvs'ky\*, I. Yu.; Khimich, I. V.

TITLE: Fourth All-Union Conference on the Theory of Elementary Particles /held in Uzhgorod from 26 to 29 November 1962/

SOURCE: Ukrayins'kyy fizychnyy zhurnal, v. 8, no. 5, 1963, 601-605

TOPIC TAGS: elementary particle, Regge pole, quantum electrodynamics, quantum field theory, unified theory of relativity, photonuclear reaction, gravitation theory

ABSTRACT: The authors describe the proceedings of the Fourth All-Union Conference on the Theory of Elementary Particles, held in Uzhgorod on 26 to 29 November 1962, and preceded by a four-day (21 to 24 November) seminar of theoretical physicists, specialists in the field of elementary particles. At the seminar eminent specialists lectured on recent developments in the field of strong interaction, high-energy quantum electrodynamics, problems of the spatial-temporal description in the relativistic quantum theory, pseudo-Euclidean space-time at small distances,

Card 1/2

L 17178-63

ACCESSION NR: AP3000242

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the unified theory of relativity. The discussion during the conference proper was concerned with such topics as Regge poles, strong interactions, weak and electromagnetic interactions, gravitation theory, the group approach to and systematization of elementary particles, and new ideas and generalizations of the quantized field theory. The conference also included a section on photonuclear reactions, a seminar to commemorate the eminent Danish physicist Niels Bohr, and a seminar on the philosophical problems of the contemporary theory of elementary particles. The proceedings of the conference are being prepared for publication.

ASSOCIATION: None

SUBMITTED: 00

DATE ACQ: 18 Jun 63

ENCL: 00

SUB CODE: NS, PH

NO REF SOV: 000

OTHER: 000

Card 2/2

ACCESSION NR: AP4010405

S/0185/63/008/012/1303/1312

AUTHOR: Lomsadze, Yu. M.; Kryvs'ky'y, I. Yu.; Romanko, G. D.

TITLE: On the possibility of a specific interaction between the E-states in the quantized probability amplitude field theory.

SOURCE: Ukrayins'ky'y fiz. zhurnal, v. 8, no. 12, 1963, 1303-1312

TOPIC TAGS: quantized field, probability amplitude, quantum mechanics, quantum theory, quantum, E-state, G-state, S-matrix, S-operator, wave function, interaction Hamiltonian, Hamiltonian

ABSTRACT: This article is a continuation of work by the authors in developing the quantized amplitude probability field theory. It is shown that two types of interaction Hamiltonians exist in the framework of that theory. Those of the first type, corresponding to absence of interaction among the E-states entering into G-states, with any arbitrary degree  $I = 1, 2, 3, \dots$  of the internal chaotic state, for characteristics of processes usually observed experimentally, lead to the same results as conventional quantized field theory and therefore cannot determine the value of the universal constant  $I$  realized in nature. Those of the second type, which have no analogy in quantized field theory and which correspond to the

Card 1/2



ACCESSION NR: AP4010406

occurrence of a specific interaction among the E-states belonging to one G-state, in addition to interaction of the first type, lead to physical effects which depend on the degree I of the internal chaotic state of the particles; that degree can in principle be experimentally determined. Since the effects are small, they can be observed only after a substantial increase in experimental precision. It probably will be easiest to detect them in processes of particle decay. The authors are cordially grateful to Professor V. L. Bonch-Bruyevy<sup>ch</sup> for valued stimulating remarks and also to Ye. V. Ky<sup>ry</sup>chuk and Sh. Sh. Kasinets' for aid in making certain calculations. Orig. art. has: 21 formulas.

ASSOCIATION: Ushgorodskyy dershuniversitytet (Ushgorod State University)

SUBMITTED: 03May63

DATE ACQ: 20Jan64

ENCL: 00

SUB CODE: IS

NO REF SOV: 008

OTHER: 003

Card 2/2

LOMSADZE, Yu.M. [Lomsadze, I.U.M.]; KRIVSKIY, I.Yu. [Kryvs'kyi, I.IU.];  
ROMANKO, G.D. [Romanko, H.D.]

Possibility of specific interaction between  $\xi$ -states in the quantum  
field theory of the probability amplitude. Ukr. fiz. zhur. 8  
no.12:1311-1312 D '63. (MIRA 17:4)

1. Uzhgorodskiy gosudarstvennyy universitet.

ACCESSION NR: AP4020305

S/0139/64/000/001/0114/0121

AUTHORS: Krivskiy, I. Yu.; Lomsadze, Yu. M.

TITLE: Problem of discrete stationary states in the theory of a quantized field of amplitude of probability

SOURCE: IVUZ. Fizika, no. 1, 1964, 114-121

TOPIC TAGS: discrete stationary state, quantized field, amplitude of probability, wave function, harmonic oscillator, hydrogen atom, energy spectrum, universal constant, discrete energy state

ABSTRACT: In the framework of the recently constructed new quantum theory--the theory of a quantized field of amplitude of probability and the theory of quantized field of a wave function--the authors study the treatment of discrete stationary states in examples of a harmonic oscillator and a hydrogen atom (and hydrogen-like atoms). They show that the results of the new quantum theory with respect to the energy spectrum of a hydrogen atom (and hydrogen-like atoms), for any value of the universal constant  $I = 1, 2, 3, \dots$ , involved in this theory, are identical to the results of the usual quantum theory. They also show that the scheme of filling

Card/2

ACCESSION NR: APL020305

electronic shells of atoms coming from the new quantum theory with any  $I$  coincides precisely with the scheme coming from the usual quantum theory. They indicate the theoretical possibility of determining the value which is realizable in nature of the new universal constant  $I$  on the basis of special experiments with atomic electrons. They discuss certain details relative to the treatment of discrete energy states in general in the new quantum theory. Orig. art. has: 18 formulas.

ASSOCIATION: Uzngorodskiy gosudarstvennyy universitet (Uzhgorod State University)

SUBMITTED: 04Sep62

DATE ACQ: 31Mar64

ENCL: 00

SUB CODE: PH

NO RER SOV: 011

OTHER: 007

Card 2/2

1977. Fizika, no. 6, 1974, p. 6.

1977. quantum mechanics, wave function, Hamiltonian, stationary Hamiltonian-quantization

This is a continuation of series of papers on quantum mechanics, stationary Hamiltonian-quantization.

SECRET

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... 1964 ... 813-826 ...

Krivskiy, Yu. (Krivskiy, Yu.)

TITLE: On the specific generalization of quantum mechanics

SOURCE: Krivskiy, Yu. fizicheskiy zhurnal v. 19, no. 8, 1964, 813-826

... quantum mechanics ... wave function ...

ABSTRACT: The wave function of an arbitrary physical system is subjected to an ... generalization (L. Schiff, Quantum Mechanics ... generalization of the quantum mechanics is given ... of the ... universal constant ... of the ... differ for 1/2 from the ... of ... the discussion of the ... the ... differences from the results of the ... the ...

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... the usual types of experiments. Perhaps the differences may become  
... experiments in a different way...  
... N. P. Nelip for stimulating...  
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... Kuznets'kyy derzhuniversytet ...

... 1964

ENCLOSURE

SUB CODE GP

NO REF SOV: 016

OTHER: 002

Card 2/2



KRIVSKIY, Karel, inz.

Possibility of practical use of vernalization and some development deviations in celery plants of *Apium graveolens* L. var. *rapaceum* (Mill.) DC. Rost výroba 9 no.9:935-956 S '63.

1. Slechtitelsky a semenarsky podnik, Chocen, slechtitelska stanice Uhretice.

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A 25 / A 4 5

3.7-183  
Křivky, Lad., Chromospheric eruptions and daily atmospheric precipitation in Prague in 1947 and 1948. [Chromospheric eruptions and daily atmospheric precipitation in Prague in 1947 and 1948.] *Meteorologický Zprávy*, 6(3-4):75, 1950. 6p., 2 tables, 5 refs. DWB—Correlations shown graphically, based on data for 1947 and 1948. Brief text. *Subject Headings*: 1. Solar influence. 2. Diurnal rainfall variations. 3. Prague, Czechoslovakia.—M.R.

5

✓ 5.2-308

551.577.82:551.590.21:523.74

Kliyak, L. (State Met. Inst. of Czechoslovakia, Prague). Yearly atmospheric precipitation in Europe in relation to the activity of the sun. *Prague. Věstník Ústavu Aeronomický, Bulletin*, 1(11/12):161-176, Dec. 31, 1951. 4 figs., 6 tables, 6 refs. DLC. The author studied the course of annual precipitation during odd and even sunspot cycles and found a number of zones with opposite results even in a part of Europe. *Subject Headings:* 1. Precipitation variations. 2. Sunspot effects.--A.A.

1950

1

NE

551.590.21-551.577  
 S.3-309  
 Kfirsky, L. (Central Astronomical Inst., Odessa). Chromospheric flares and daily precipitation in Prague in the years 1947, 1948 and 1949. *Prague. Univerzita Viny Astro-nomicky, Bulletin*, 3(2):25-28, March 31, 1952. fig., 2 tables, 8 refs. DLC—A statistical study showing that, on an average, precipitation increases every third to seventh day after the appearance of a significant chromospheric flare by an amount of about 20% (total for the zero day 256 mm, for the fourth day 370 mm—smoothed values). The total number of days with significant flares was 299. Subject Headings: 1. Solar influences 2. Precipitation.—A.A.

5000  
 1  
 GED  
 JCH



6000

✓ 7.4-280  
 Neivsky, L. (*Utrofizikal. Obs. Dobroy. Cheta*). Relation of sunspot recurrency to the  
 duration of cold and warm seasons. *Bulletin of the Astronomical Institute of Czechoslovakia*,  
 Prague, 4(2):44-47, 1953. 3 Figs., 5 refs. In English; Russian summary p. 47. DLC--The  
 relation of the length of winter and summer (as calculated by J. U. K. for 1851-1948 on the basis  
 of meteorological and phenological data) to the Eigenson "recurrency index A" (which is based  
 on the repetition and duration of sunspots) indicates that the duration of winters after maxi-  
 mum "recurrency" is about 75 days and after minimum "recurrency" is about 90 days. Sub-  
 ject Headings: 1. Solar influences 2. Sunspot recurrency index 3. Length of seasons. — M.R.

Handwritten initials and scribbles.

"APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R000826610013-4

APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R000826610013-4"

HRIVSKY, L.

Climate of Ondrejov for astronomical needs. p.133.  
METEOROLOGICKE ZPRAVY. Vol. 6, No. 5, Oct. 1953.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, No. 3, March 1956



KRIVSKY, L.

Classical, complex, and dynamic climatology. p. 127. Prague.  
METEOROLOGICKE ZPRAVY. Vol. 7, no. 5. Nov. 1954.

SOURCE: East European Accessions List (EEAL), LC, Vol. 5, no. 3, March 1956.

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APPROVED FOR RELEASE: 06/14/2000

CIA-RDP86-00513R000826610013-4"

KRIVSKY, L.

KRIVSKY, L. Long-range changes of the Atlantic-European frontal zone in relation to climate. p. 114. Vol. 9, no. 5/6, Dec. 1956.  
METEOROLOGICKE ZPRAVY. Praha, Czechoslovakia.

SOURCE: East European Accessions List (EEAL) Vol. 6, No. 4--April 1957

KREVSKY, I."

Atmospheric precipitation in Prague-Klementinum during the period from 1804-1956.  
in German.

p. 182 (Studia Geophysica Et Geodaetica) Vol 1 no 1 1957. Praha, Czechoslovakia.

SO: Monthly Index of East European Accessions (EEAI) IC, Vol 7, no 1 Jan 1958

condition: 1. Noctilucent clouds

KRIVSKY, L."

Climatic changes in our country and climatological forecasting for the next few decades.

p. 71 (Meteorologické Zprávy) Vol. 10, no. 3, June 1957. Praha, Czechoslovakia.

SO: Monthly Index of East European Accessions (EEAI) IC, Vol. 7, no. 1, Jan. 1958

KATVSKY, L.

The importance of artificial satellites for meteorology.

P. 12. (KRIDLA VLASTI.) (Praha, Czechoslovakia) No. 1, Jan. 1958

SO: Monthly Index of East European Accession (EEAI) LC. Vol. 7, No. 5, 1958



KRIVSKY, L.; LETFUS, V.

Relation between singularities of precipitation and meteoric showers.  
In English. p. 100.

BULLETIN OF THE ASTRONOMICAL INSTITUTES OF CZECHOSLOVAKIA. (Ceskoslovenska akademie  
ved. Astronomicky ustav) Praha, Czechoslovakia, Vol. 10, no. 3, May 1959

Monthly List of East European Accessions (EEAI), LC, Vol. 8, no. 11, Nov. 1959  
Uncl.

31467

3.1730

S/035/62/000/004/018/056  
A001/A101

AUTHORS: Křivský, L., Tlamicha, A.

TITLE: Emission of the 1960 May 13 flare and absorption of cosmic noise

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 4, 1962, 59,  
abstract 4A474 ("Byul. astron. in-tov Chekhoslovakii", 1960, v. 11,  
no. 6, 238-241, English, Russian summary)

TEXT: A cosmic noise receiver was put into operation at the observatory in Ondrjeyova for recording at a frequency of 30.70 Mc cosmic radio emission from the region around the North Star. The receiver makes it possible to study indirectly corpuscular emission from the flares, since the latter affects the ionosphere state and causes absorption of cosmic noise emission. On May 13, 1960, an intense flare was observed in H $\alpha$  light; simultaneously were registered radio emission on meter and decimeter waves, atmospherics and cosmic noise level. The records were compared of the following phenomena: width of H $\alpha$  line in emission, intensity of solar radio emission at waves of 37.56 and 130 cm, the curve of the course of sudden atmospheric disturbances at a frequency of 27 kc, ✓

Card 1/2

Emission of the 1960 May 13 flare ...

S/035/62/000/004/018/056  
A001/A101

and the curve of the course of cosmic noise absorption (30.70 Mc); this characterizes their close correlation and characteristic temporal regularities of this correlation. ✓

V. Yesipov

[Abstracter's note: Complete translation]

Card 2/2

3,1550

30253  
S/G35/G2/000/003/015/053  
A001/A101

AUTHOR: Křivský, L.

TITLE: Sporadic X-ray emission of the Sun and ionosphere

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 3, 1962, 59,  
abstract 3A427 ("Riše hvězd", 1960, v. 41, no. 9, 161-167, Czech)

TEXT: Chromospheric flares of back prominence type with intensely emitting nuclei over the disk's edge are sources of sporadic X-ray emission with  $\lambda < 10 \text{ \AA}$ ; they cause disturbances of the ionosphere D-layer, as this takes place at flares on the disk. If the flare proper is located beyond the disk's edge but near to it, it also causes radiation whose source is located in the upper part of the chromosphere or in the adjacent part of the corona over the flare. Recording graphs of atmospherics at a frequency of 27 kc are presented. Flares caused, as a rule, rapid enhancement of atmospherics, radio emission on decimeter wavelengths (recording was carried out on the wavelength 56 cm), and disturbances in the lower parts of the ionosphere D-layer. As was revealed by rocket measurements, X-rays following a flare penetrate to an altitude of 60 km.

[Abstracter's note: Complete translation]

V. Bronshten

Card 1/1

22360

Z/023/61/000/001/006/006  
A207/A126

3.1540

AUTHORS: Křivský, Ladislav, and Letfus, Vojtěch

TITLE: Some terrestrial effects of flares and surge-type filaments

PERIODICAL: Studia Geophysica et Geodastica, no. 1, 1961, 92

TEXT: On May 5, 1958, a detailed study was made of the active region on the sun and the data obtained were used for investigating the effects of the wave emission of flares and rapidly developing filaments in the terrestrial atmosphere (in the lower parts of the D-region). The data revealed a close physical connection between the surge filament and the evolution of the flare in the center of activity. During the occurrence of the surge, the anomalous ionizing emission increases. This anomalous ionizing short-wave emission is found to occur also during the formation of surge-type protuberances on the solar disk limb. Most of the cases investigated indicated that a "continuous" radio emission or emission of the type III exists in a wide spectral range. It could be shown that an ionizing emission accompanying a flare and surge-type filament most probably occurs in the part of the corona, which takes part in the complex flare process. There are

Card 1/2

22360

Some terrestrial effects of flares and...

Z/023/61/000/001/006/006  
A207/A126

4 references: 2 Soviet-bloc and 2 non-Soviet-bloc. The reference to the most recent English-language publication reads as follows: L. Křivský, V. Letfus: The Active Region on the Sun on May 5, 1958. Bull. Astr. Inst. Czech., 11, 1960, 53. J

ASSOCIATION: Astronomical Institute, Czechoslovak Academy of Sciences, Ondřejov

SUBMITTED: September 26, 1960

Card 2/2

40001

S/035/62/000/008/035/090  
A001/A101

9.9/30

AUTHORS: Křivský, L., Mokřý, P., Hladký, J.

TITLE: Cosmic radiation and the disturbance of the lower ionospheric layer during the flare of October 6, 1959

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 8, 1962, 69, abstract 8A458 ("Byul. astron. in-tov Chekhoslovakii", 1961, v. 12, no. 3, 93 - 97, English; Russian summary)

TEXT: A class 1+ chromospheric flare was observed at the astronomical observatory of AS CzechSSR at Ondrjeova on October 6, 1959, at 14<sup>h</sup>09<sup>m</sup> - 14<sup>h</sup>45<sup>m</sup> UT (30°5 N, 63° E). The flare was accompanied by an active return ejection and intensification of the solar radio emission on wavelengths 56 and 130 cm. Simultaneous observations of atmospherics at the 27-kc frequency have shown first, their ordinary intensification due to the disturbance of region D and second, at 15<sup>h</sup>20<sup>m</sup> - 15<sup>h</sup>50<sup>m</sup> UT a marked drop of the level due, in the authors' opinion, to the disturbance of the ionosphere by cosmic radiation. Increase of intensity, which lasted 25 min, was detected in all components of cosmic radiation observed.

X

Card 1/2

S/035/62/000/008/035/090  
A001/A101

Cosmic radiation and the...

at observatories Lomnitskiy Shchit (2,634 m) and Praga-Karlovy (228 m) equipped with standard neutron monitors and counter telescopes. This intensity increase, which occurred 50 - 70 min after brightness maximum of the flare field and the largest ejection loop, was greater than statistic fluctuations and occurred almost simultaneously in all components. It amounted to  $2.5 \pm 0.7\%$  on the neutron monitor at the Lomnitskiy Shchit and  $2.8 \pm 1.6\%$  at Praga. The intensity increase of cosmic radiation in the diffusion region of the drop was extremely great in relation to the class of the flare. It can be supposed that there exists a relation between the origination of radiation and rapid changes of filaments (under the action of changes in magnetic field during the flare development). This case was analyzed, as well as the intensification of cosmic radiation related to the rapid development of the loop-like prominence of May 4, 1960 (RZhAstr, 1961, 3A334). The conclusion has been drawn that the axis of spatial angles of ejection of cosmic rays towards the Earth passes within the loop, i.e., coincides with the orientation of the intensity electric vector. Encounter of cosmic rays with the Earth is possible, if the loop axis is directed towards the Earth, and the general magnetic field will force the particles to move to the Earth. There are 18 references.

[Abstracter's note; Complete translation]

From authors' summary

Card 2/2



S/035/62/000/006/028/064  
A001/A101

3.1720

AUTHORS: Hřebík, F., Kvíčala, J., Křivský, L., Olmr, J.

TITLE: Observations of flares at the Ondřejov Observatory in the year 1960

PERIODICAL: Referativnyy zhurnal, Astronomiya i Geodeziya, no. 6, 1962, 59-60  
abstract 6A446 ("Byul. astron. in-tov Chekhoslovakii", 1961, v. 12,  
no. 5, 169-184, English; Russian summary)

TEXT: This is the regular report on observations of flares at Ondřejov  
(Czechoslovakia). Data are presented on 309 flares and related bursts of solar  
radio emission at frequencies 808, 536 and 231 Mc, as well as on atmospherics  
at a frequency of 27 kc. Figures are given which show the curves of time  
variations of H $\alpha$  line width. There are 18 references. /c

I. Zh.

[Abstracter's note: Complete translation]

Card 1/1

BOUSHKA, Yan [Bouska, Jan]; KOCHI, Alois [Koci, A.], kand. fiz-mat. nauk, inzh.;  
 MRAZEK, Irzhi [Mrazek, Jiri]; SHUBRT, Yaroslav  
 [Subrt, Jaroslav]; RUPREKHTOVA, Libushe [Ruprechtova,  
 Libuse], inzh., retsenzent; KRZHIVSKI, Ladislav  
 [Krivsky, Ladislav], retsenzent; BEGOUNEK, Rudol'f  
 [Behounek, Rudolf], prof., nauchnyy red.; TRZHISKOVA,  
 Lyudmila [Triskova, Ludmila], inzh., nauchnyy red.

[Results of geomagnetic, telluric, and ionospheric observa-  
 tions conducted at the observatories of Pruhonice, Budkov,  
 and Panska Ves in 1959] Rezul'taty geomagnitnykh, telluri-  
 cheskikh i ionosfernykh izmerenii, provedennykh v observa-  
 toriakh Prugonitse, Budkov i Panska Ves v techenie 1959  
 goda. Praga, Izd-vo Chekhoslovatskoi Akad. nauk, 1962.  
 742 p. (MIRA 16:7)

1. Nachal'nik kollektiva Geomagnitnoy observatorii Prugonitse  
 [Pruhonice] u Pragi (for Kochi). 2. Nachal'nik ionosfernogo  
 otdela Geomagnitnoy observatorii Prugonitse [Pruhonice] u  
 Pragi (for Mrazek).

(Czechoslovakia--Geophysics--Observations)

L 12770-63

EWT(1)/FCC(w)/BDS/EEC-2/ES(v)

AFFTC/ESD-3 Pa-4/Fq-4 GW  
S/169/63/000/004/001/017

68

AUTHOR: Hrebik, F., Kvicala, J., Krivsky, L.

TITLE: Observations of flares at the Ondrejov Observatory in 1961

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1963, abstract 4A71  
(Biol. astron. in-tov Chekhoslovakii, v. 13, no. 5, 1962,  
199-208; English, summary in Russian)

TEXT: Data are presented on 157 flares and radio bursts associated  
with them at frequencies of 9400, 808, 536, and 231 megacycles, also data on  
atmospherics at 27 kilocycles recorded in 1961; also there are curves of  
changes in the width of the  $H\alpha$  line plotted vs. time.  
Author's summary.

[Abstracter's note: Complete translation.]

Card 1/1

41188  
S/169/62/000/009/117/120  
D228/D307

9.9842

AUTHOR: Křivský, L.

TITLE: Flare maximum and "sluggishness" of the ionospheric D-region

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 9, 1962, 30, abstract 9G217 (Byul. astron. in-tov Chekhoslovakii, 13, no. 2, 1962, 59-62 (Eng.; summary in Rus.))

TEXT: The value of the multiple recombination and electron density factor for the D region in the ionosphere,  $(\alpha N)_D$ , and the magnitude of the multiple average excess of N in a flare can be calculated from the difference in time between a solar flare's maximum and the maximum of the SEA effect (E. V. Appleton's (1953) and M. A. Ellison's (1953) sudden enhancement of atmospherics). The value of the SEA maximum's lag relative to the maximum of the flare,  $\Delta t$ , has been determined by Ellison in several of his works; it comprises  $\Delta t$  9.6 - 7 min. The mean value  $\Delta t = 2.4$  min is derived on the grounds of many data for the recording of SEA effects and for flare

Card 1/2

Flare maximum and ...

S/169/62/000/009/117/120  
D228/D307

measurements at the Ondrzheyov Observatory, as well as on the basis of other estimates; the value found most often for  $\Delta t$  is 1.0 min. These values approximate to those for the lag of the geomagnetic crochet maximum. When  $\Delta t = 2.4$ , the magnitude of  $(\alpha N)_D$  comprises  $3.47 \times 10^{-3} \text{ sec}^{-1}$  and N increases by 9- to 12-fold; if  $\Delta t = 1.0$ , we have  $8.33 \times 10^{-3} \text{ sec}^{-1}$  and N increases by 22- to 30-fold. The reason for the discrepancy of the  $\Delta t$  value, determined by the new method, with Ellison's data is shown in examples. [Abstracter's note: Complete translation.]

X

Card 2/2

KRIVSKY, L.; SALAVA, T.; SNEJDAREK, I.

Recording the ionizing emission of flares and eruptive prominences  
by the receiver of atmospherics at the Ondrejov Observatory.  
Biulleten astron inst 14 no.1:5-9 '63.

1. Astronomical Institute of the Czechoslovak Academy of Sciences,  
Ondrejov (for Krivsky). 2. Institute for Research and Development  
of Electroacoustics, Prague (for Salava and Snejdarek).

L 12770-63

EWT(1)/FCC(w)/BDS/BEC-2/ES(v)

AFFTC/ESD-3 Pa-4/Pq-4 GW  
S/169/63/000/004/001/017

68

AUTHOR: Hrebik, F., Kvicala, J., Krivsky, L. (2)

TITLE: Observations of flares at the Ondrejov Observatory in 1961

PERIODICAL: Referativnyy zhurnal, Geofizika, no. 4, 1963, abstract 4A71  
(Biol. astron. in-tov Chekhoslovakii, v. 13, no. 5, 1962,  
199-208; English, summary in Russian)

TEXT: Data are presented on 157 flares and radio bursts associated  
with them at frequencies of 9400, 808, 536, and 231 megacycles, also data on  
atmospherics at 27 kilocycles recorded in 1961; also there are curves of  
changes in the width of the  $H_{\alpha}$  line plotted vs. time.  
Author's summary.

[Abstracter's note: Complete translation.]

Card 1/1

KRIVSKY, L.

Y-shaped stage of cosmic ray flares as a development phase of conditioning ejection. Biul astr Cs 14 no.3:77-83 '63

1. Astronomical Institute of the Czechoslovak Academy of Sciences, Ondrejov.



KRIVSKY, L., RNDr., CSc.; BARCAL, R., MUDr.

Mortality of population and the extreme changes of  
atmospheric pressure. Meteor zpravy 16 no.3/4:76-77  
Ag '63.

1. Astronomický ústav, Československá akademie věd, Ondřejov  
u Prahy; Interní klinika lékařské fakulty, Plzeň.

HREBIK, F.; KVICALA, J.; KRIVSKY, L.; OLMR, J.

Observations of flares at the Ondrejov Observatory in the year 1962. Biul astr Cz 14 no.6:245-250 '63.

1. Astronomical Institute of the Czechoslovak Academy of Sciences, Ondrejov.

L 41519-65 ARG/SEO-2/ENG(j)/ENT(d)/FBD/FSS-2/ENG(r)/ENT(l)/FBO/ENT(e)/ENT(f)/  
 ENT(g)/FS(v)-3/EPF(c)/ECC(k)-2/ENG(a)-2/ENT(1)/ENT(f)/ENG(r)/ENT(c)/ENT(v)/EJA(1)/  
 EPR/EMP(j)/T-2/ENG(a)-2/EMP(h)/EPA(bb)-2/ECC(c)-2/SEO-2/ENG(c)/FCS(k)/ENT(b)/  
 APP015110 P1-4/P2-4/P3-4/P4-4/ BOCK EXPLOITATION P1-4/P2-4/P3-2/P4-4/P5-4/163  
 Po-4/Pe-5/Fq-4/Pac-4/Fr-4 IJP(c) AST/TT/JN/DD/RM/GM/BC/JH  
 Barvir, Mironlav, (Engineer); Benes, Konrad, (Professor, Doctor); Douska, Jiri, (Doctor);  
 Hudil, Ivo, (Graduate in Philosophy); Cepicka, Zdenek, (Candidate of Physical and Mathematical Sciences);  
 Cadr, Milan, (Doctor); Holcral, Vladimir, (Doctor); Dvorak, Antonin, (Candidate of Medical Sciences);  
 Dvorak, Josef, (Doctor); Guth, Vladimir, (Candidate of Medical Sciences, Docent, Doctor); Horak, Zdenek,  
 (Doctor of Physical and Mathematical Sciences, Corresponding Member of the Czechoslovak Academy of Sciences,  
 Professor, Doctor); Hrozdar, Jan, (Doctor of Physical and Mathematical Sciences, Doctor); Kleczek, Josip,  
 (Doctor); Klest, Paul, (Candidate of Physical and Mathematical Sciences); Kolodovsky, Milan, (Doctor);  
 Kojcky, Mironlav, (Candidate of Legal Sciences); Krivsky, Vladimir, (Candidate of Physical and Mathematical Sciences);  
 Kriz, Zdenek, (Candidate of Physical and Mathematical Sciences); Ledvina, Milan, (Engineer); Malcik, Vladimir,  
 (Doctor); Moravek, Milan, (Candidate of Medical Sciences); Mrazek, Jaroslav, (Candidate of Medical Sciences,  
 Engineer); Mrazek, Jiri, (Candidate of Technical Sciences); Neuzil, Ludek, (Doctor); Novotny, Zdenek, (Candidate of Physical and Mathematical Sciences);  
 Novotny, Zdenek, (Doctor, Perneger, Jaroslav, (Doctor); Candidate of Physical and Mathematical Sciences);  
 Pesek, Rudolf, (Professor, Doctor, Engineer); Pijal, Mironlav, (Doctor of Technical Sciences, Corresponding member, of the Czechoslovak Academy of Sciences);  
 Plavec, Mironlav, (Doctor); Pokorny, Zdenek, (Candidate of Physical and Mathematical Sciences, Docent, Doctor);

Card 1/2  
2

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14

Ruml, Vladimir, (Candidate of Medical Sciences, Doctor); Sadil, Josef, (Doctor of Physiological Sciences); Gehnal, Ladislav; Stvornik, Jiri, (Doctor); Evestka, Zdenek, (Doctor); Tuma, Jaroslav, (Candidate of Physical and Mathematical Sciences, Doctor); Tyml, Vasily, (Docent, Engineer); Ulehla, Ivan, (Candidate of Technical Sciences, Professor, Doctor); Valnicek, Boris, (Candidate of Physical and Mathematical Sciences, Doctor); Vanysek, Vladimir, (Candidate of Physical and Mathematical Sciences, Docent, Doctor); Vlasak, Marian, (Candidate of Physical and Mathematical Sciences; Doctor); Voda, Miloslav, (Engineer)

Principles of astronautics (Zaklady kosmonautiky) Prague, Orbis, 1964. 445 p. illus., biblio. 5000 copies printed.

TOPIC TAGS: cosmonautics, rocket, satellite, space flight, missile <sup>2</sup> <sub>15</sub>

PURPOSE AND COVERAGE: This publication is a popular scientific reference book for people working in cosmonautics. The book presents a survey of cosmonautics and space flight up to 1 June 1963.

TABLE OF CONTENTS:

Card 2/8